

FOCAL LENGTH DISPERSION COMPENSATION FOR FIELD CURVATURE

ABSTRACT OF THE DISCLOSURE

An optical arrangement and method are provided for receiving a light beam
5 having a plurality of spectral bands and directing subsets of the spectral bands along optical
paths to respective optical elements. The light beam is received at an input port. The optical
elements are configured as a substantially planar array. A dispersive element is configured to
10 which route the spectral bands *SW 2/8/01 RFC 2/8/01*
angularly spread SW 2/8/01 RFC 2/8/01
~~direct~~ the light beam, after it has been collimated, into a plurality of angularly separated
beams that correspond to the plurality of spectral bands. A first focusing element is disposed
with respect to the dispersive element and with respect to the array of optical elements such
15 that ~~dispersion in the focal distance of the first focusing element for different angularly~~
~~separated beams compensates for field curvature aberration caused by the first focusing~~
~~element.~~
variation of focal length with wavelength of the separated
beams is compensated by the field curvature of the system,
and the final image surface is flattened. *SW 2/8/01*
RFC 2/8/01
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